

WHAT IS CLAIMED IS:

1. A semiconductor device utilizing an oscillator installed outside, and comprising:
  - an inverting amplifier which is provided in parallel with the oscillator and includes an insulated gate type field effect transistor;
  - a buffer circuit which includes an insulated gate type field effect transistor and transmits a signal output from the inverting amplifier to another circuit; and
  - a transmission gate which is installed between an output terminal of the inverting amplifier and an input terminal of the buffer circuit, and includes an insulated gate type field effect transistor.
2. The semiconductor device according to claim 1, the transmission gate being a CMOS transmission gate formed with an n-channel MOS transistor and a p-channel MOS transistor in combination.
3. The semiconductor device according to claim 1, the transmission gate comprising an n-channel MOS transistor.
4. The semiconductor device according to claim 1, the transmission gate comprising a p-channel MOS transistor.
5. The semiconductor device according to claim 1, the transmission gate being set "on" constantly.
6. The semiconductor device according to claim 1, further comprising a first resistor coupled to an input terminal of the inverting amplifier, the first resistor and the inverting amplifier, which are coupled together in series, being provided in parallel with the oscillator.
7. The semiconductor device according to claim 6, further comprising a second resistor coupled to the output terminal of the inverting amplifier, the first resistor, the inverting amplifier and the second resistor, all of which are coupled together in series, being provided in parallel with the oscillator.
8. The semiconductor device utilizing the oscillator according to claim 1, further comprising a feedback resistor provided in parallel with the oscillator.
9. The semiconductor device according to claim 8, the feedback resistor being provided outside the semiconductor device.
10. An oscillating circuit, comprising:
  - an oscillator; and
  - a semiconductor device which utilizes the oscillator;

the semiconductor device including:

an inverting amplifier which is provided in parallel with the oscillator and includes an insulated gate type field effect transistor;

a buffer circuit which includes an insulated gate type field effect transistor and is used to send out a signal output from the inverting amplifier to another circuit; and

a transmission gate which is provided between the output terminal of the inverting amplifier and the input terminal of the buffer circuit, and includes an insulated gate type field effect transistor.